

Appl. No. 10/717,873  
Amdt. dated 4-26-06  
Reply to Office Action of February 2, 2006

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### REMARKS

Claims 1-13 are pending in the application. Claims 1-13 are rejected. Claims 1, 3-5, 10-11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 1087801 (Sheller) in view of US 5,710,184 (Burns). Claims 2 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sheller in view of Burns and WO96/28378 (DeWar). Claims 6-8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sheller in view of Burns and U.S. 5,002,989 (Naumovitz). Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sheller in view of Burns and JP49113839 (Nippon).

Claim 1 is amended to remove the list of possible methods of coating in favor of explicitly stating the qualities those methods have in common. Removal of the list is supported by the Specification at page 1, lines 19-20, summary of invention. Also, Claim 1 is first amended to add the phrase. This amendment is supported by the Specification at page 2, lines 7-10; page 5, lines 5-7 and lines 14-15. This phrase is added to explicitly state a characteristic of the coating previously implicit in the listed methods of applying it. Claim 1 is further amended to add the phrase, "and such that the resulting coating penetrates beyond the surface of the cork to an extent observable by light microscope when the coating is of a color different from that of the synthetic cork closure." This amendment is supported by the Specification in the Examples at page 6, lines 27-28 and page 7, lines 1-3. It explicitly states a result previously implicit in the list of methods.

Applicant's claimed invention is a *synthetic cork closure for a liquid container* having at least a portion thereof coated with a gas impermeable polymer. The coating is applied using a method wherein the gas impermeable polymer is dissolved in a solvent therefore and such that the resulting coating penetrates beyond the surface of the cork to an extent observable by light microscope when the coating is of a color different from that of the synthetic cork closure. Applicant's Examples show the physical effects resulting from such application of the coating. These results include penetration into the synthetic cork as stated in amended Claim 1 as well as difficulty in separating the coating from the synthetic cork.

Applicant consistently uses the term "synthetic cork closures" in the disclosure and description of the field of invention as "to synthetic cork closures for liquid containers and to processes for making such closures." It is clear that Applicant's disclosure and claims clearly and consistently use the term "synthetic cork closure" to refer to a cork or stopper-like structure (shape) further defined in the specification, especially at page 2, lines 1-6.

The Office maintains in the "Response to Arguments" in the Office Action of February, 2, 2006, that certain words of the phrase "synthetic cork closure for a liquid container" are to be ignored as preamble of the claim. To do so would be picking and choosing convenient and eliminating inconvenient words from a phrase consistently used as a whole in Applicant's Specification as the phrase labeling the invention. First, Applicant has chosen to describe his invention as a "synthetic cork closure," not

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as a "closure" or some other single word. Applicants are allowed to use terms greater than one word as the descriptive name of their invention. The term "synthetic cork closure" is used no fewer than 11 times in the 11 pages preceding the claims in Applicant's Specification. Frequently, the shorthand "synthetic closure" or "cork closure" is used, each time clearly referring back to a "synthetic cork closure." It is this term as a whole that has been given a definition by Applicant's specification; therefore, it cannot be parsed. Applicant's invention is not just any "closure" or any closure made from a synthetic material. The very first sentence of the detailed description of the invention says, "The synthetic cork closures which can be employed in the practice of the present invention include the synthetic closures described in U.S. Patents 5,975,322, 5,904,965, 5,855,287, 5,710,184, 5,496,862 and 4,363,849, incorporated herein by reference." As Applicant has previously pointed out the synthetic cork closures incorporated by reference, cover more than the standard cylindrical or tapered stopper sometimes referred to as a "cork," for instance closures that extend from inside to outside a liquid container and optionally have threads. They all generally involve closing bottles in a cork-like manner, that is, at least partially filling the neck of a bottle. It must be noted that Applicant's specification calls the synthetic cork closure as a "synthetic cork" several times. The meaning is, and must be, consistent with this usage throughout claim interpretation and examination. For a synthetic cork closure to be referred to as "a cork," the closure must be a like a cork, meaning a stopper. If "cork" merely connotes a type of material, sentences where the term "a synthetic cork" or "the synthetic cork" is used would be nonsense.

Furthermore, it is not clear where the Office would break the preamble of Applicant's claims from the body. Normally, a preamble is divided from the body by a word like "comprising" or "consisting of." Applicant's first claim starts, "A synthetic cork closure for a liquid container having at least a portion thereof coated with ..." The term "synthetic" certainly imparts an important quality to defining Applicant's claimed invention, saying that the cork closure is synthetic (polymeric) rather than made of natural substances. Acknowledging that word, as the Office does by citing Burns for substitution of material, indicates that the preamble ends before the word "synthetic." Including and excluding alternating words cannot be called separating a preamble from the body, yet it would seem that the Office recognizes that "synthetic" imparts definition, but then wishes to ignore "cork" (at least with the meaning used consistently in the Specification) and keep "closure" since that is certainly necessary to know what the claimed subject matter is, then discard "for a liquid container" then keep "having at least a portion thereof coated." Dissecting the claim into many separate parts, only some isolated parts of which are ignored, is butchering the claim, not separating a preamble from the body.

It must further be noted that Applicant's first claim refers back to the synthetic cork closure for a liquid container in using "at least a portion thereof." The phrase "synthetic cork closure" is, thus, necessary for understanding the claim. The Court of Appeals for the Federal Circuit consistently states that when limitations in the body of the claim derive antecedent basis from the preamble, the preamble is part of the claimed invention. See NTP v. Research in Motion, 418 F.3d 1282, 1306, 75 U.S.P.Q.2d 1763 (Fed. Cir. 2005):

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When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention." *Eaton Corp. v. Rockwell Int'l Corp.*, 323 F.3d 1332, 1339 (Fed.Cir. 2003); see also *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1350 (Fed.Cir. 1998).

If the phrase "for a liquid container" is not limiting as the Office asserts, then the body must start at "having." However, "having at least a portion thereof coated with ..." does not define an invention because there is no indication of what subject matter has its portion coated. The Court of Appeals for the Federal Circuit has said that the preamble is not limiting only when the body of a claim, without the preamble, defines a structurally complete invention. See *Poly-America, L.P., v. GSE Lining Technology, Inc.*, 383 F.3d 1303, 1310, 72 U.S.P.Q.2d 1685 (Fed. Cir. 2004).

On the other hand, a preamble is not limiting "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention." *Rowe v. Dror*, 112 F.3d 473, 478 (Fed.Cir. 1997).

In Applicant's claimed invention, the asserted body (starting after "having") does not define a structurally complete invention without the asserted "preamble." Therefore, the so-called preamble must be part of the claim that defines the invention, that is the claim to be examined.

The present situation better conforms to the instances when all parts of the claim are important in defining Applicant's claimed invention. All parts are needed to understand what the inventors actually invented and intended to encompass by the claim. All parts help determine the scope of the claim. In these instances, the Court of Appeals for the Federal Circuit says the preamble is considered in interpreting the claim.

Whether to treat a preamble as a limitation is a determination resolved only on review of the entire[ ] ... patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.  
*Poly-America, L.P. v. GSE Lining Technology, Inc.*, 383 F.3d 1303, 1309, 72 U.S.P.Q.2d 1685 (Fed. Cir. 2004).

[I]f the preamble helps to determine the scope of the patent claim, then it is construed as part of the claimed invention. *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995) ("[W]hen the claim drafter chooses to use *both* the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.").  
*NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1305-1306, 75 U.S.P.Q.2d 1763 (Fed. Cir. 2005).

Therefore, all of Applicant's remarks refer to a claim wherein the claimed subject matter starts at "synthetic" and includes all words thereafter.

Applicant respectfully notes that Applicant has previously in the course of prosecuting this application submitted definitions of emulsion, solution, solvent, solution, miscible, immiscible, colloid heterogeneous mixture, homogeneous mixture,

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plasticizer, and thixotropy. Those definitions are of record and need not be submitted again.

**2. Claims 1, 3-5, 10, 11, and 13 stand rejected under 35 U.S.C. § 103 as unpatentable over GB 1087801 (Sheller) in view of US 5,710,184 (Burns).**

Sheller discloses natural cork (bark) gaskets treated to enable them to withstand temperatures and pressures. Beginning at page 1, line 11, Sheller states, "This invention relates to cork gaskets..." Further, page 1, lines 52-56, Sheller plainly states, "These gaskets conventionally are fabricated from sized cork particles which may be mixed with one or more types of filler substances in particle or liquid form and held together in sheet form by a binding agent." In lines 14-15 of page 1, Sheller explains, "Cork gaskets are primarily used to provide an effective seal between confronting faces of adjacent elements when positioned therebetween..." Further, at page 1, lines 25-35, Sheller explains the problem solved by treating his gaskets made of natural cork, "modern day applications require that these cork gaskets be able to withstand relatively high temperatures and pressures and have a good oil and grease resistance. Often the fluid pressures and temperatures existing in modern processes quite exceed those against which untreated cork would be effective. In addition, the detergent substances in present day lubricating oils tend to attack and pass or escape through untreated gaskets." Sheller describes the coating for his natural cork gaskets as "an emulsion of an acrylic-modified vinylidene chloride copolymer." See page 1, lines 39-40, page 1 line 90-page 2, line 1 and page 2, lines 21-22. One such emulsion is said to be Rhoplex R-9 manufactured by Rohm and Haas Company, but it is not further identified. See page 2, lines 3-4. (Applicants have been unable to find evidence that this material might be currently available or to identify it sufficiently to reproduce it. Applicants have repeatedly requested that the Examiner supply a sufficient identification of it if possible.) Sheller teaches very specifically, at page 1, lines 82-84, "It is important that the gaskets be completely covered with this emulsion. This may require several coats of the liquid emulsion..."

The teachings of Sheller are not logically applicable to the present invention. Sheller is in a different field of art and addresses totally different problems. Sheller tells us in his title and in both the sentences having phrases on page 1, line 25 that he is teaching about gaskets. Sheller states clearly at page 1, line 11, "This invention relates to cork gaskets." Applicant's invention relates to synthetic cork (structure/shape) closures for liquid containers. The problem with such closures is "permeation of gases in and out of the cork and the scalping of flavors caused by the polymers used." Application, page 1, lines 13-15. There are differences in

**Subject matter:** synthetic closures having a corklike shape, said closures being for containers of liquid v. gaskets for machinery made of natural cork (bark)

**Material:** synthetic (plastic, polymeric) v. natural cork (the bark of a tree)

**Environment:** containers of liquid, e.g. bottles of wine v. machinery with heat and pressure as described by Sheller

**Problems to be solved:** Synthetic closures for liquid containers, while solving some problems of natural corks used to close liquid containers, have

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the problem of "uncontrolled permeation of gases in and out of the cork and the scalping of flavors caused by the polymers used." See Applicant's Specification, page 1, lines 13-15. Sheller's problem is that of natural cork gaskets needing to withstand relatively high pressures and temperatures as well as detergents and lubricants, e.g. "between confronting faces of adjacent machine elements." Sheller, page 1, lines 26-29 and 50-52.

It is not true as alleged in the "Response to Arguments," that the disclosure of Sheller "reads on the claimed 'cork closure.'" As Applicant has shown previously, the term "cork" as used consistently in Applicant's claims and specification is used in the noun sense of shape or structure similar to a cork rather than as a description of a type of material (bark). Thus, the meaning of "synthetic cork closure" includes closure having shape and structure with similarities to that of a cork stopper. A stopper-like shape does not fit well "between confronting faces of adjacent elements when positioned therebetween." Sheller teaches his gasket must be between such faces. Sheller's gasket could not, then, meet the structural meaning of Applicant's use of the term "synthetic cork closure." Thus, a gasket does not read on a "synthetic cork closure" having the structural meaning clearly used throughout Applicant's Specification as previously explained and that can be and was referred to as a "synthetic cork" in Applicant's Specification. It is only by rejecting Applicant's clear and consistent use of terminology that any analogy can be drawn.

As the Court of Appeals has said, while the Office must give the claims their broadest reasonable interpretation, **the interpretation must be consistent with what one skilled in the art would understand.** In other words there are at least 2 limits on breadth of interpretation, (1) reasonableness and (2) what one skilled in the art would understand. See the explanation in In re Cortright, 165 F.3d 1353, 1358, 49 U.S.P.Q.2d 1464 (Fed. Cir. 1999):

Although the PTO must give claims their broadest reasonable interpretation, this interpretation must be consistent with the one that those skilled in the art would reach. See In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997)

The teachings of Sheller are not in the same field of endeavor as Applicant's claimed invention or Burns. The Office has alleged, in the "Response to Arguments" of February 2, 2006, that Sheller is in the same field of endeavor as Applicant's claimed invention because synthetic cork closures have been introduced to solve problems with natural cork closures. This overlooks the fact that Sheller states clearly that the teachings therein apply to gaskets, natural cork gaskets. It also overlooks the consistent structural meaning in Applicant's Specification and claims of "synthetic cork closure" explained previously. Synthetic cork closures have been used to solve problems with natural cork closures **only where, in both instances, the phrase "cork closure" has a meaning consistent with the shape somewhat similar to that of a cork** as further explained or amplified by the patents incorporated by reference in Applicant's specification. This does not mean that synthetic cork closures have been, or can be, substituted for other types of closures that happen to be made of natural cork material. A distinction must be made between the two very different uses of the term "cork." One implies at least a portion of the closure has a generally cylindrical,

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frustoconical or tapered shape or variations thereon. The other states a material, namely a bark. The subject of Applicant's invention is not "synthetic cork" as a material that is a cork replacement; it is a cork closure (having the described shape) that is made of synthetic material. Natural cork, the bark, has a wide variety of applications. No one skilled in the art would expect that a synthetic replacement for one of those uses, the cork-like structure, would be a replacement for natural cork in other uses like gaskets. Thus, gaskets and closures for liquid containers, said closures having a generally cork-like shape are not in the same field of endeavor. The ONLY thing the two have in common is the word "cork" but used for two completely different meanings.

The Office cites Burns because, "Sheller does not teach that the cork should comprise synthetic cork." The Office further alleges that "[I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the synthetic cork taught in Burns in place of the cork taught in Sheller."

Burns teaches the manufacture of certain synthetic cork closures for liquid containers where a thermoplastic elastomer (TPE) exemplified by a styrene block copolymer (column 4, lines 6-39) and a blowing agent are molded such that a skin is formed (column 1, line 65 through column 2, line 2). The resulting synthetic stopper is said to offer high resistance to oxygen permeation and produce little or no product tainting. (Column 2, lines 34-35) It is described further as "able to prevent passage of oxygen from the atmosphere to the wine, while simultaneously substantially absorbing oxygen from the wine or the air space within the wine bottle..." (Column 3, lines 27-30) While advantages are summarized elsewhere in more general terms, Burns teaches certain advantages specific to bottle corks, column 3, lines 32-36, "The molded closure has the ability to be removed with a corkscrew without substantial expansion, crumbling or disintegration (such expansion, crumbling or disintegration either causes the wine to become generally unpalatable and/or render the molded closure unusable)."

There is no valid motivation for combining the teachings of Sheller and Burns. The Office alleges that the improved characteristics of Burns materials "with regard to color, dimensional stability, crumbling and cost" motivate their use in the teachings of Sheller. However, Burns, like Applicant, uses synthetic materials in bottle closures. Burns is very specific about the important factors being transmission of oxygen (not an issue in Sheller) and wine contamination. One skilled in the art of natural cork gaskets would not reasonably apply the teachings of Burns regarding synthetic bottle stoppers, e.g. for wine, to solve the problems faced by natural cork gaskets in hot, high pressure machines with lubricants and detergents. Fear of the possible effects of temperatures and pressures as well as detergents in lubricates, to which Sheller teaches that the gaskets must be exposed, on the materials used by Burns and lack of reason to believe that a coating effective for the shortcomings of natural cork would overcome completely different problems in thermoplastic elastomeric corks of Burns would far overcome the suggested motivations. If those reasons were not enough, the lack of reason to think the coating that sticks on natural cork would stick on the material of Burns would further overcome any motivation based on cost color and on crumbling and expanding when a corkscrew is used.

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With the exception of cost, the motivations suggested by the Office have questionable applicability to gaskets, especially when one reads Burns as a whole with explanations of when these advantages are found. Color is hardly an issue in gaskets between opposing faces of machinery. Other advantages asserted by the Office of the Burns material are further explained in Burns, column 3, lines 32-36, "The molded closure has the ability to be removed with a corkscrew without substantial expansion, crumbling or disintegration (such expansion, crumbling or disintegration either causes the wine to become generally unpalatable and/or render the molded closure unusable)." Thus, the dimensional stability and crumbling advantages apply to situations like the use of a corkscrew, again not an issue with gaskets in machinery.

Further reasons for the substitution of the material in Burns into the gaskets of Sheller not to be motivated would be those of different subject matter, material, environment, and problem outlined previously as the reasons it is illogical to apply the teachings of Sheller to Applicant's claimed invention. All of the reasons that Sheller is not applicable to or is not in the same field of endeavor as Applicant's claimed invention apply to Burns. Burns deals with closures for liquid containers, preferably wine bottles, having a generally cork-like shape and which are made of plastic.

The teachings of Sheller cannot be applied to every environment where cork (the bark) is used to seal fluids. The Office alleges in the "Response to Arguments" that "the cork closure taught in Sheller reads on the use of said closure in any environment wherein cork is commonly used to seal fluids." This statement is obviously directed to the use of the meaning of "cork" as the bark material. To mean otherwise would be to say that a gasket has a generally cylindrical or frustoconical shape, a shape not effective between "opposing faces" of machinery. As previously explained, Applicant's claimed invention is directed to the meaning of the term "cork in terms of structure or shape. This cannot be the meaning of "cork" in Sheller. Furthermore, Sheller, itself, refutes its applicability to other uses of cork bark. On page 1, lines 11-12, the patent says, "This invention relates to cork gaskets and is especially concerned with the provision of a cork gasket having an improved coating." This clearly states the subject is bark gaskets. If it were not otherwise clear, Sheller says in the very next sentence, "Cork gaskets are primarily used to provide an effective seal between confronting faces of adjacent elements when positioned therebetween." Cork-like (stopper-like) shapes would not be effective for this use. In the same paragraph, lines 25-30, Sheller teaches, "Additionally, modern day applications require that these cork gaskets be able to withstand relatively high temperatures and pressures and have a good oil and grease resistance. Often the fluid pressures and temperatures existing in modern processes quite exceed those against which untreated cork would be effective." This is not the environment for the "stopper type bottle closures" of Burns. (See, column 1, line 30.) Burns teaches in Column 3, lines 24-26, "Accordingly, the present invention features a molded closure for a liquid container, preferably a wine bottle...." No one skilled in the art would expect that a cork for a wine bottle has the same environment or interchangeable environment with a gasket for fitted between opposing faces such that it will withstand high temperatures and pressures and have good oil and grease resistance.

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Combinations of references to show obviousness require a reasonable expectation of success.

In line with this statutory standard, our case law provides that "the consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." *In re Dow Chem.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). Two requirements are contained in this criterion. The first requirement is that a showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). ... The second requirement is that the ultimate determination of obviousness "does not require absolute predictability of success. ... All that is required is a reasonable expectation of success." *In re O'Farrell*, 853 F.2d 894, 903-904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988); see also *In re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651-52 (Fed. Cir. 1985). *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000).

Where claimed subject matter has been rejected as obvious in view of a combination of prior art references, a proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. See *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d (BNA) 1529, 1531 (Fed. Cir. 1988). Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure. *Id.* We agree with appellants that the PTO has not established the prima facie obviousness of the claimed subject matter. The prior art simply does not disclose or suggest the [invention], or convey to those of ordinary skill a reasonable expectation of success in doing so. *In re Vaeck*, 947 F.2d 488, 493; 20 U.S.P.Q.2d (BNA) 1438, (Fed. Cir. 1991).

The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. See *Burlington Industries v. Quigg*, 822 F.2d 1581, 1583, 3 USPQ2d 1436, 1438 (Fed. Cir. 1987); *In re Hedges*, 783 F.2d 1038, 1041, 228 USPQ 685, 687 (Fed. Cir. 1986); *Orthopedic Equipment Co. v. United States*, 702 F.2d 1005, 1013, 217 USPQ 193, 200 (Fed. Cir. 1983); *In re Rinehart*, 531 F.2d 1048, 1053-54, 189 USPQ 143, 148 (CCPA 1976). Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure.

In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention.

*In re Dow Chemical Co.*, 837 F.2d 469, 473; 5 U.S.P.Q.2d (BNA) 1529, 1531 (Fed. Cir. 1988).

There is no reasonable expectation of success for the proposed combination of Sheller with the substitution of material from Burns, if it were made. There is no teaching or suggestion that a coating of Sheller would be expected to be effective for the different purposes of Sheller or Burns when on a thermoplastic elastomer such as that taught by Burns. Sticking a coating to a plastic (Burns) is quite different from sticking it to a porous substance like natural cork (Sheller) just as the problems to be solved are as different as wine (oxygen degradation of wine in Burns) and (effects of

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oil, heat and pressure on natural cork in Sheller). Furthermore, there is no reasonable expectation that the coating of Sheller would stick to the TPE of Burns. The properties of a thermoplastic elastomer (Burns) and natural cork are so different that one cannot extrapolate adhesion or other properties. Furthermore, the heat and pressure requirements taught by Sheller may be excessive for stability of the elastomer of Burns.

The Office alleges in the "Response to Arguments," page 7, "one of ordinary skill in the art would have expected success when making a substitution commonly made in the art." Yet there is no indication that a plastic wine cork has ever been substituted into the environment described in Sheller as, "these cork gaskets [are required to] be able to withstand relatively high temperatures and pressures and have a good oil and grease resistance. Often the fluid pressures and temperatures existing in modern processes quite exceed those against which untreated cork would be effective." See Sheller, page 1, lines 24-29. **This is FAR from a substitution commonly made.** The underlying substitution the Office makes is the substitution of the meaning "bark" of the word "cork" for the meaning "frustoconical shape" of the same word.

The combination of Sheller and Burns in the manner suggested by the Office would not result in Applicant's claimed invention if they could be combined. To "utilize the synthetic cork taught in Burns in place of the cork taught in Sheller" as proposed by the Office would have resulted in a gasket of thermoplastic elastomer (TPE). A gasket made from TPE with at least an attempted coating with Rhoplex R-9 according to the teachings of Sheller is still quite different from Applicant's claimed synthetic cork closure for a liquid container coated as claimed in Applicant's Claims 1, 3-5, 10, 11, and 13. Differences such as shape, purpose, and environment have been discussed previously.

Furthermore, differences from the claims include the following:

(1) Compared to Claim 1 the alleged combination is not a synthetic cork (shaped) closure, not for a liquid container, and might not be coated with a gas impermeable polymer, depending on how the Rhoplex R-9 emulsion would interact with TPE in the environment taught by Sheller. Certainly, there is no indication it would have the physical characteristics of penetration into the as required by Claim 1. Likewise there is no indication it would have the difficulty of removal demonstrated in Applicant's Example 1 for penetration as specified in Claim 1. There is no use of a coating dissolved in a solvent as required in Claim 1.

(2) Compared to Claim 3, the whole gasket is coated as compared to the coating of both ends of a cork.

(3) Compared to Claim 10, the coating compound is an EMULSION of an UNKNOWN acrylic-modified vinylidene chloride polymer rather than a coating composition comprising from about 5 weight percent to about 20 weight percent of a vinylidene chloride polymer, from about 70 weight percent to about 90 weight percent of an organic solvent or blend of organic solvents and from about 5 weight percent to about 10 weight percent of a thixotropic agent. The claimed use of solvent is unquestionably different because an

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emulsion is not a solution. There is no teaching or suggestion of thixotropic agent.

(4) Claims 11 and 13 are more different because solvents are specified that are good SOLVENTS for the vinylidene chloride polymers, which would, in turn, give the physical results shown in Applicant's Example 1 including penetration now specified in Applicant's Claim 1 from which these claims depend. At best, the gasket resulting from the combination of references would be coated, if the coating of TPE with Rhoplex R-9 were effective, using an emulsion, which BY DEFINITION is not dissolved.

Claim 3 is separately patentable because of the difference outlined previously. A gasket does not even have ends in the sense that a cork has them. Burns teaches no coatings; thus, together the references cannot teach or suggest a cork-type closure with both ends covered. Thus, no prima facie case of obviousness has been made.

Similarly, Claim 10 is separately patentable because of the difference outlined previously. It requires a gas impermeable polymer coating composition comprising from about 5 weight percent to about 20 weight percent of a vinylidene chloride polymer, from about 70 weight percent to about 90 weight percent of an organic solvent or blend of organic solvents and from about 5 weight percent to about 10 weight percent of a thixotropic agent. No teaching of an offered reference indicates that Rhoplex R-9 or any other material described in the text of either reference reads on this or a similar composition.

Moreover, Claims 11-13 are separately patentable because of the difference outlined previously. They require particularly effective solvents for the vinylidene chloride compositions, thus, give physical results as shown in Applicant's Example 1. In his "Response to Arguments" on page 5, next to bottom line, of the Office Action of February 2, 2006, the Examiner alleges that "Furthermore, Sheller teaches the use of a solvent. Specifically, the coating is described as an emulsion (page 2, lines 1+)." Applicant has previously submitted evidence of the definitions of "solvent," "solution" and "emulsion" that show that an emulsion, while it generally involves a liquid medium, **does not involve a solvent for the polymer**. A solvent by definition DISSOLVES. Again see, General Chemistry Online Glossary at

<http://antoine.frostburg.edu/chem/senese/101/solutions/glossary.shtml> Any other reference that defines both will also show that **by definition the emulsion** is made up of UNDISSOLVED droplets SUSPENDED in an IMMISCIBLE liquid. Applicant's claimed invention specifies specific solvents for the polymer component of the coating. SOLVENTS DISSOLVE. Emulsions are made up of suspended droplets that could not be immiscible droplets if they dissolved. The definitions pointed out that the solution is a homogeneous mixture, but the emulsion is colloid, which is by definition a heterogeneous mixture. **THEY ARE UNQUESTIONABLY DIFFERENT, OPPOSITES**. It cannot (correctly) be said that an emulsion teaches a solvent for the polymer. While sloppy misuse of terminology sometimes leads to the terminology "solvent" for any liquid medium, it is clear from Applicant's Claim 1 as amended and Specification at page 2, lines 7-13 that the coating composition is "prepared by dissolving" and that "The organic solvent dissolves the gas impermeable polymer." (Page 2, lines 8 and lines 9-10, respectively).

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The Office has written "With regard to the method limitations of claims 1, 7, 8, 10 and the solvent of claims 11 and 13, the examiner takes the position that said limitations are method limitations. The courts have held that a method of making a product does not patentably distinguish a claimed product from a product taught in the prior art unless it can be shown that the method of making the product inherently results in a materially different product."

First, Applicant respectfully requests that according to the requirements of CFR §1.104 (d)(2), the examiner provide citation to the reference(s) relied upon, namely the court case or cases that include the holding used for the rejection. Applicant is unable to find a case stating what the Office has written.

Instead, Applicant finds the following:

That a process limitation appears in a claim does not convert it to a product by process claim. Second, there is no basis for treating combinations of old elements differently in determining patentability. The analysis under 35 U.S.C. § 103 for any claimed invention requires a legal determination of whether the claimed invention as a whole would have been obvious to one of ordinary skill in the art at the time it was made.

Fromson v. Advance Offset Plate, Inc., 720 F.2d 1565; 219 U.S.P.Q. 1137, (Fed. Cir. 1983).

We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable.

In re Fessmann, 489 F.2d 742, 744; 180 U.S.P.Q. 324, (CCPA 1974).

Product claims may be drafted to include process steps to wholly or partially define the claimed product. In re Luck, 476 F.2d 650, 177 USPQ 523 (CCPA 1973). To the extent that the process limitations distinguish the products over the prior art, they must be given the same consideration as traditional product characteristics. *Id.*, at 525.

In re Hallman, 655 F.2d 212; 210 U.S.P.Q. 609, (CCPA 1981).

Thus, the Office has not provided a rejection specific enough to move the burden of proof to Applicant to prove patentability by comparative data or otherwise because no prima facie case of obviousness has been shown.

Moreover, Applicant's amendments are believed to have converted the implications of the alleged process limitations to explicit physical limitations regarding the solutions and their penetration into the synthetic cork closures.

Furthermore, the Office has not provided a rejection specific enough to even ALLOW Applicant to make a showing of differences because it is not possible to repeat coating anything with Rhoplex R-9 or any "acrylic-modified vinylidene chloride polymer." There is no indication in Sheller or elsewhere of the meaning of the phrase "acrylic - modified vinylidene chloride polymer." That term could have numerous meanings. While copolymers of acrylates and vinylidene chloride occur in widely diverse art, Applicant finds no evidence that these are or have been called "acrylic-modified." In fact, "acrylic" refers to the acid form, acrylic acid; while, it is the ester form, "acrylates" that are typically used as comonomers with vinylidene

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chloride. Since Rhoplex R-9 was apparently a product of Rhom and Haas, Applicant endeavored to find some acrylic modification that Rhom and Haas might have taught in a time consistent with Sheller. The closest that applicants were able to find was U.S. Patent 3,678,133 teaching an acrylic modified vinyl halide polymer. The vinyl halide polymer therein is acrylic modified by **blending** it with a composite interpolymer having a core of acrylic based elastomeric polymer and a shell of rigid thermoplastic polymer comprising at least 50 percent alkyl methacrylate monomers. (See U.S. Patent 3,678,133 column 2, lines 3 and 10-20.) Alternatively, one could look for patents associating any process with a Rhoplex. Here one finds U.S. Patent 3,017,989 which at column 2, line 30 associates Rhoplex B-15 with U.S. Patents 2,790,735 and 2,790,736. While these patents do not use the term "acrylic- modified" or speak of modification of any polymer, they do refer to polymers formed of acrylic or methacrylic acids, with certain esters thereof, and, optionally, at least enough of a hardening monomer, which might be vinylidene chloride, among many other possibilities, to raise the second order transition temperature appropriately. It does not appear that any of these possible meanings meet the elements of Applicant's claims. **All these possibilities in the meaning of "acrylic modified vinylidene chloride" with no reason to choose any of them over the others, only confirm the impossibility of making a comparison based on the teachings of Sheller and Burns.**

While it is impossible to compare Applicant's invention to the alleged combination with undefined coating, Applicant did show inherent physical properties in the resulting claimed product from using various methods of applying a solution of vinylidene chloride polymer as specified in Applicant's Claims 5-13. Using solutions of vinylidene chloride to coat the synthetic corks results in penetration of the solution and, thus, the coating into the open cells of the synthetic corks and results in a coating which is difficult to remove as shown in the several samples of Applicant's Example 1. Several methods of coating were used, See Example 1. Resistance to permeation was shown in Examples 2-6. In summary, a structural result is shown despite the fact that comparison with the art currently being treated as closest is not possible. Applicant's claims have been amended to specify penetration of the resulting coating into the synthetic cork closure. This removes any doubt about whether the feature obtains in the claimed invention.

In the "Response to Arguments" the Office notes on page 5 that there is no evidence that the "coating that does not penetrate" in the closest prior art. Comparison with the closest prior art requires that the art alleged to be closest be something that well enough defined that it can be repeated for comparison. Until then, no comparison is possible. The examiner wrote that the evidence that the microscopic examination showing penetration into the cork was not of record. Applicant respectfully notes Applicant's Examples from Specification page 5, line 23 through page 7, line 6, especially page 6, lines 27 through page 7, line 3. To Applicant's understanding this evidence is of record. Courts apparently consider examples of record; see Spero v. Ringold, 54 C.C.P.A. 1407, 1412, 377 F.2d 652; 153 U.S.P.Q. (BNA) 726 (CCPA 1967):

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Accordingly, we will now consider the facts of record. Examples 5 and 5A of Spero's parent application show the methods of preparing 6-methyl progesterone and 6-methyl progesterone, respectively.

If Examples in Applicant's Specification are not considered of record, Applicant respectfully requests that the Examiner cite authority verify this classification of the Examples in accordance with CFR §1.104 (d) (2).

However, it is clear that all the limitations found in Claims 1, 7, 8, 10, 11 and 13 are not process limitations or solvent limitations. Claim 1 still requires that a *synthetic cork closure for a liquid container* have at least a portion thereof *coated with a gas impermeable polymer* and now *that such that the resulting coating penetrates beyond the surface of the cork to an extent observable by light microscope when the coating is of a color different from that of the synthetic cork closure*. There has been no prima facie showing even of these unquestionably physical aspects, much less of the entire claim. Claims 7 and 8 still depend from Claim 6 which has very specific composition limitations. It is noted that these two claims were not rejected in the rejection based on Sheller and Burns although the Examiner discussed the limitations found in these claims with the rejection of Claims 1, 3-5, 10, 11 and 13 in the Office Action of February 2, 2006. Claim 10 also lists several coating composition limitations rather than process limitations. While Claims 11 and 13 involve the use of specific solvents, they depend from Claim 10 where a specific coating composition is specified. Thus, each of these claims involves more than limitations which are alleged to be process limitations. None of these physical limitations have been taught in the references cited.

Furthermore, Applicant points out that the MPEP and the court cases cited therein require that process limitations be considered for patentability. It is only *after* it has been shown that the claimed product appears to be the same or similar to that of the prior art that the burden shifts to the applicant to show differences based on process steps. This requires, at a minimum, a prima facie case.

In this instance, the Examiner has not shown that the art teaches anything "identical with or only slightly different than a product claimed" as required by In re Fessmann cited previously. Although the standard for a prima facie case requires more, like motivation for combining, expectation of success and the like, there does not appear to be anything shown in the art "identical with or only slightly different than a product claimed" even if only those aspects of these claims separate from the alleged "method limitations" are considered.

Thus, Sheller in combination with Burns does not render obvious any of Applicant's Claims. 1, 3-5, 10, 11, and 13, especially Claims 3, 10, 11 and 13 and claims dependent thereon, which are separately patentable. No prima facie case of obviousness has been made for any of the claims.

**3. Claims 2 and 9 stand rejected under 35 U.S.C. 103(a) as obvious over Sheller in view of Burns as applied to Claims 1, 3-5, 10, 11 and 13 in further view of W096/28378 (Dewar).**

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The combination of Sheller, Burns and DeWar is improper and not motivated. The impropriety of combining Sheller and Burns was explained previously.

DeWar, like Burns, teaches a bottle closure. Dewar teaches use of a coating of a liquid impermeable substance on a natural cork bottle closure, particularly a natural cork which is low quality or made of cork particles glued together. (Page 1, lines 12-16) The purpose is to avoid having off flavors from chemicals used to bleach the natural cork or to glue the particles of cork together. (Page 1, lines 5-11 and 15-16, respectively) Dewar teaches on page 3, at lines 3-5, "The coat(s) may only be applied to a portion of the surface of the mass of cork. For example, the coat(s) may only be applied to the face(s) of the closure that is likely to contact the contents of the container."

Sheller, the primary reference, teaches directly away from coating less than all surfaces by teaching specifically that "[i]t is important that all surfaces be completely covered with this emulsion" which may take several coats. See Sheller page 1, lines 82-86. The Office maintains that because Dewar teaches coating of one side of a cork is adequate to avoid the taste of bleach or glue from the cork in wine, limiting the coating of Sheller to one surface, despite Sheller's strong teaching against same, would be adequate. Those skilled in the art, when looking to modify the teachings of Sheller but with a substitution of material from Burns, would not expect to be able to ignore specific teachings of Sheller in favor of teachings regarding a barrier to bleach or glue flavors in wine. Finding isolated inconsistent teachings in references does not render claims obvious.

The Office is reminded that it has long been established that:

We have noted elsewhere, as a "useful general rule," that references that teach away cannot serve to create a prima facie case of obviousness. *In re Gurley*, 27 F.3d 551, 553, 31 U.S.P.Q.2d 1130, 1132 (Fed. Cir. 1994).

McGinley v. Franklin Sports, Inc., 60 U.S.P.Q.2d 1001; 262 F.3d 1339, 1353 (Fed. Cir. 2001).

We agree with Hedges that the prior art as a whole must be considered. The teachings are to be viewed as they would have been viewed by one of ordinary skill. (Citations omitted) "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art."

In re Hedges, 228 U.S.P.Q. 685, 687 (Fed. Cir. 1986).

Not only does the teaching away from coating one surface by Sheller negate the alleged motivation for combination with the teachings of DeWar to do so in a different situation, but also the teaching away negates any expectation of success. No prima facie case has been made.

Even if the combination were proper, it would not result in Applicant's claimed invention. Dewar teaches the opposite of Applicant's Claim 9. Dewar optionally coats only the end in contact with the liquid (wine) to prevent flavors from the cork going into the wine. This coating of the inside end does not teach or suggest coating only the free end (outside end) of a cork as in Applicant's Claim

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9. In fact, Dewar teaches away from coating the free end because that would not accomplish his purpose of protecting the wine from bleach and glue flavors from the cork.

Furthermore, in Claim 9, the coating comprises vinylidene chloride polymer dissolved in a solvent, which is applied to the *free end*, then the solvent is allowed to evaporate. **A gasket in machinery could hardly be thought of as having a free end**, especially an end free enough for application of a coating in a solvent or emulsion while the gasket is in place and from which solvent would evaporate. **An emulsion has no solvent**. Those skilled in the art would quickly recognize structural differences between the gasket resulting from the proposed combination and Applicant's claimed closure.

Similarly, Applicant's Claim 2 requires that "only one end of the closure is coated with the gas impermeable polymer." If a gasket were thought of as having something analogous to the end of a stopper-like structure, that would be some part not in contact with solid surfaces, thus, the edges. Only coating the one edge of a gasket is *drastically* different from Sheller's teaching of the importance of coating the all gasket surfaces, even if it takes several coats. Sheller's teachings would tell anyone, skilled or unskilled, not to expect success by coating only an "end" or edge, especially the exterior edge (most analogous to a free end) to protect from lubricants and detergents inside.

Claim 9 is separately patentable because DeWar teaches coating the opposite of the cork as compared to Applicant's Claim 9 as explained previously.

Thus, Sheller in combination with Burns and DeWar does not render obvious Applicant's Claims. 2 and 9, especially Claim 9, which is separately patentable. No prima facie case of obviousness has been made for any of the claims.

**4. Claims 6-8 stand rejected under 35 U.S.C. 103(a) as obvious over Sheller in view of Burns as applied to Claims 1, 3-5, 10, 11 and 13 in further view of Naumovitz et al (US 5, 002,989).**

The combination of Sheller, Burns and Naumovitz is improper and not motivated. The impropriety of combining Sheller and Burns was outlined previously.

Naumovitz teaches a composition in powder form comprising a copolymer of vinylidene chloride, an inorganic stabilizer, an epoxidized vegetable oil, an oxidized polyolefin and a paraffin or polyethylene wax. (Column 1, line 61 through column 2, line 10. The composition is in powder form prior to extrusion. (Column 3, lines 46-47.) The composition is suitable for fabrication into blown or cast mono- and multi-layer films, rigid and flexible containers, rigid and foam sheet, tubes, pipes, rods, fibers, and various profiles. (Column 7, lines 1-4.) The films and articles are fabricated using conventional extrusion and coextrusion. (Column 6, lines 34-35.) Even the title says that the formulation is extrudable.

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Applicant sees no teaching or suggestion that these compositions could be applied as coatings either in emulsion form as in Sheller or in solution form as in Applicant's claimed invention. If the Office sees such a suggestion, Applicant respectfully requests that the teaching be pointed out.

The combination of Naumovitz with Sheller or Burns is unmotivated and illogical. Naumovitz is in the field of extruded plastics, specifically starting with a powder, with no teaching or suggestion of coating, gaskets (Sheller) or bottle closures (Burns). Neither the teachings of Burns nor that of Sheller motivates combination with teachings of extruding powdered plastics into films or articles. Nor do they motivate combination on the basis of composition.

The Office notes correctly that neither Sheller nor Burns teaches "that amount of acrylic copolymer that should be incorporated into the vinylidene chloride copolymer." Then the Office points out that Naumovitz teaches 4-10 weight percent alkyl acrylate and 96-90 weight percent vinylidene chloride. **In fact, neither Sheller nor Burns teach a copolymer of alkyl acrylate and vinylidene chloride.** As pointed out earlier in discussion of the rejection of Claims 1, 3-5, 10, 11, and 13, there are several possible meanings of "acrylic-modified vinylidene chloride polymer." The meaning cannot be ascertained from the information cited. The designation of a simple copolymer of vinylidene chloride and an alkyl acrylate is a highly unlikely interpretation of the term. "Acrylic-modified vinylidene chloride polymer" is not used in the art with that meaning. Furthermore, "acrylic" usually refers to acrylic acid rather than its esters which are usually referred to as acrylates. **There is not even the slightest teaching, suggestion or motivation to jump from "acrylic modified vinylidene chloride" in Sheller and no teaching of vinylidene chloride or any other coating in Burns to look for an amount of alkyl acrylate ester comonomer.** This jump in logic is against the words actually used in Sheller to something taught in Applicant's specification alone. Looking for a teaching of alkyl acrylate monomer in a simple copolymer with vinylidene chloride involves **an assumption that can only be based on hindsight** in view of Applicant's own teaching. This would be the hindsight interpretation of "acrylic-modified vinylidene chloride polymer" in Sheller to mean that the result is merely a copolymer of vinylidene chloride with some amount of acrylic monomer, a common polymer family for which the use of the term cannot be located by Applicant.

Assumptions, combination of references, or selection and combination of elements based on hindsight in view of Applicant's specification are not permitted by the U.P.T.O. Board or the Court of Appeals for the Federal Circuit. This is a consistent and long-standing principle.

The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time. (Citation omitted).

Uniroyal v. Rudkin-Wiley, 5 USPQ2d 1434, 1438, (Fed. Cir. 1988).

As this court has stated, "virtually all [inventions] are combinations of old elements." ... Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art

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corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." (Citations omitted)  
In re Rouffet, 149 F.3d 1350, 1357, (Fed. Cir. 1998).

A rejection based on section 103 must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. ... [The Board] may not ... resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.  
In re GPAC Inc., 57 F.3d 1573, 1582, (Fed. Cir. 1995).

To support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. ... Based upon the record before us, we are convinced that the artisan would not have found it obvious to selectively pick and choose elements or concepts from the various references so as to arrive at the claimed invention without using the claims as a guide. It is to be noted that simplicity and hindsight are not proper criteria for resolving the issue of obviousness.  
Ex parte Clapp, 227 USPQ 972, 972, (USPTO Bd. of Apps. 1985).

[A] person having the references before him who was not cognizant of appellant's disclosure would not be informed that the problems solved by appellant ever existed. Therefore, can it be said that these references which never recognized appellant's problem would have suggested its solution? We think not...  
In re Martin, 152 USPQ 610, 615, (CCPA 1967).

Determination of obviousness cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention. There must be a teaching or suggestion within the prior art, within the nature of the problem to be solved, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources, to select particular elements, and to combine them as combined by the inventor. When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination. (Citations omitted)  
Crown Operations International, Ltd. v. Solutia Inc., 289 F.3d 1367; USPQ2d 1917, 1376, (Fed. Cir. 2002).

Furthermore, there is no expectation of success in combining Naumovitz with Sheller and Burns. There is no reason to think that the teachings of Naumovitz would apply to an emulsion coating of any kind. Naumovitz teaches a powdered composition which is useful for extrusion, a process that those skilled in the art realize is quite different from coating with a solution or emulsion. If extrusion can be used to coat, it is quite unlikely to result in more than a laying of a strip of plastic on whatever the substrate might be, gasket or stopper. This does not teach or suggest the penetration of the coating as specified in Applicant's amended claims. Furthermore, adhesion would be doubtful. Complete coating of the entire outer surface of the gasket as Sheller teaches is very important is contrary to extrusion. There is no reason to think a powdered composition suitable for extrusion is suitable for an emulsion or solution coating.

The Office's assertion that the motivation for combination is that "such copolymers have improved processability while maintaining the desired barrier

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properties is based on hindsight rather than the teachings of the reference. Naumovitz **does not teach "processability."** If the Office finds the word "processability" in the teachings of Naumovitz, Applicant respectfully requests that the Office direct the Applicant to the column and line. Naumovitz teaches "extrudability." (Column 2, line 46) Applying an emulsion as taught in Sheller does not require extrudability. There is no teaching or suggestion that extrudability of a powder implies certain properties or qualities such as processability after extrusion is complete. Extrusion, as Naumovitz teaches starts with a powder form and results in a plastic film or article. Coating as taught by Sheller starts with a liquid emulsion form (page 1, lines 69-70) and involves the "sheet articles are drawn through and immersed in this pool thereby ensuring that the entire outer surface of the article is coated" (page 1, lines 74-76). While Naumovitz teaches that his compositions retain barrier properties after extrusion, there is no teaching or suggestion that the barrier properties would be imparted to the gasket of Sheller as the Office seems to suggest. Sheller clearly teaches that all surfaces of the gasket must be coated, not a result envisioned in extrusion. It might be that the composition of Naumovitz could be used to extrude a sheet from which a synthetic gasket could be cut, but that would not be close to Applicant's claimed invention.

Because Naumovitz's compositions are powders for extrusion, and Sheller teaches the importance of coating a natural cork gasket on all surfaces with a liquid, the references cannot be combined, with or without the substitution of the material of Burns for that of Sheller. Both motivation and expectation of success are absent. Also, Naumovitz is in a different field of art from Applicant's claimed invention, Burns and Sheller.

If the references were combined one would not achieve Applicant's claimed invention. The type of extrusion taught by Naumovitz would hardly result in coating. If one imagined that some sort of coating could be achieved, at best one could imagine an extruded slab or film lying on a gasket, this does not have the penetration claimed and the resulting inseparability of the coating from the synthetic cork (shaped) closure shown in Applicant's examples to be a feature of Applicant's claimed invention.

Claim 7 is separately patentable as distinguished from this alleged combination of references. In Claim 7, the coating process is selected from the group consisting of painting, rolling, dipping, dripping, pouring the composition containing the gas impermeable polymer onto the surface of the cork and combinations thereof. Even those with very little skill in the art, would recognize that an extrudable powder as taught by Naumovitz would result in a cork quite different from the coated cork illustrated in Applicant's Examples where coatings "were applied to some of the corks by painting, using a paint brush, rolling, using a paint roller, dipping and dripping onto the surface of the cork." (Specification at page 6, lines 24-26.)

Claim 8 is separately patentable as distinguished from this alleged combination of references. In Claim 8, the coating process is selected from the group consisting of analog gravure coating, offset coating, pad print coating, screen coating, stencil coating, brush coating, spray coating, and combinations thereof. Again, very little skill is needed to recognize that these mostly printing or painting methods result

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in a thin coating, more like ink from printing than that of powder or extruded plastic from the extrusion compositions of Naumovitz.

Thus, Sheller in combination with Burns and Naumovitz does not render obvious Applicant's Claims 6-8, especially Claims 7 and 8 which are separately and independently patentable. No prima facie case of obviousness has been made for any of the claims.

**5. Claim 12 stands rejected under 35 U.S.C. 103(a) as obvious over Sheller in view of Burns as applied to Claims 1, 3-5, 10, 11, and 13 further in view of JP49113839A (Nippon).**

Nippon, in the abstract supplied by the Office, teaches, "Colloidal silica (I) was used as thickening agent for emulsions of polymers from >1 of isoprene, vinyl chloride vinylidene chloride, styrene, acrylic acid, methacrylic acid, acrylonitrile, Me acrylate, Bu acrylate, ME methacrylate, vinyl acetate, and vinyl propionate and were added during or after the emulsion polymn."

No prima facie case of obviousness has been made because there is no motivation to combine Nippon with Sheller and/or Burns. There is no indication in Sheller or Burns that a thickener is needed and no indication in Nippon that it would be helpful in a situation like that of Sheller or Burns. The alleged motivation in the Office's statement, "The motivation for doing so is that silica is a known thixotropic agent" does not provide a reason for combination because there is no teaching or suggestion in the cited references of needing a thixotropic agent. Furthermore, the combination of Sheller and Burns has been shown to be improper previously.

Again, Applicant's claims have been used with hindsight, as a roadmap to pick and choose aspects of unrelated references to try to find all the components of Applicant's claimed invention. As the cases cited previously show, this is not sufficient to build a prima facie case of obviousness.

There is no expectation of success. Aside from the expectations that the materials of Burns might well not work in the heat, pressure, lubricants and detergent of Sheller and might not adhere to the coating, there is no expectation that thickening the emulsion would provide a satisfactory result. Sheller teaches that the gasket is coated by being drawn through a pool of the emulsion to ensure the entire outer surface of the article is coated. If that pool were thicker and thixotropic, there is no indication that the gasket would be coated such that every surface would be coated as Sheller teaches is necessary. Common experience teaches that a thickened emulsion can easily have so much surface tension that it pulls up, leaving uncoated portions of the gasket, especially when that gasket is a plastic one rather than natural cork. Many acrylic paints are emulsions or similar to emulsions. See <http://www.answers.com/latex&r=67> where latex is defined as "la-tex (lā'těks) n., 2. An emulsion of rubber or plastic globules in water, used in paints, adhesives, and various synthetic rubber products. 3. Latex paint." Envision how a latex paint (emulsion) gets thicker as it ages and beads up rather than covering a surface, especially a plastic surface like Burn's TPE.

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Furthermore, the unmotivated combination of Nippon with Sheller and Burns would not lead to Applicant's claimed invention. The Office has said that the material of Burns would be substituted for the natural cork (bark) in Sheller's gaskets; that would result in a TPE gasket. Sheller's coating method involves an emulsion of the unidentified substance "acrylic modified vinylidene chloride polymer." Nippon teaches that if that material is made in an emulsion process, the colloidal silica would be added during or after polymerization. A plastic (TPE) gasket possibly coated, possibly unevenly coated, with an emulsion is **not the same** as or closely similar to Applicant's claimed synthetic cork (shape) closure for liquid containers coated with a SOLUTION of the specified composition comprising from about 5 weight percent to about 20 weight percent of a vinylidene chloride polymer, from about 70 weight percent to about 90 weight percent of an organic solvent or blend of organic solvents and from about 5 weight percent to about 10 weight percent of a thixotropic agent (from Claim 10 from which Claim 12 depends) selected from fumed silica, kaopolite, bentonite, talc and mixtures thereof. Applicant's examples show the physical results of using a solution, and Applicant's amended claims specify the result of penetration of the coating into the synthetic cork closure.

Furthermore, there has been no showing that fumed silica (Applicant's Claim 12) is equivalent to colloidal silica taught in Nippon. Applicants respectfully request that if such an equivalence is true that a reference be provided according to the requirements of CFR §1.104 (d)(2).

Thus, Sheller in combination with Burns and Nippon does not render obvious Applicant's Claim 12. No prima facie case of obviousness has been made for the claim.

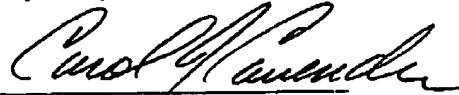
In addition to the rejections, the Office faults Applicant's for not supplying evidence that there is a structural difference, presumably from the art, resulting from the process features recited in the claims. Applicant's claims stand amended to require penetration of the coating into the synthetic cork closure. Applicant's examples show structure including coating penetration and adhesion resulting from dissolved coating materials. It is not possible for Applicant to compare with the proposed combination of Sheller and Burns because Rhoplex R-9 or any other acrylic-modified vinylidene chloride polymer is not enabled sufficiently to be reproducible. Applicant does not know what "acrylic-modified vinylidene chloride" is. Nor has Applicant been successful in finding a source to procure it. Simple due process requires that the Applicant be given sufficient information for legally meaningful comparison before appeal. Applicant has repeatedly respectfully requested this information under the requirements of CFR §1.104 (d)(2) and continues to do so if the Office maintains that a comparison should be made. Applicant respectfully notes, however, that comparison is not warranted without a prima facie case of obviousness.

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Amdt. dated 4-26-06  
Reply to Office Action of February 2, 2006

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Thus, since no prima facie case of obviousness has been made regarding any of Applicant's claims, Claims 1-13 are patentable. Applicant respectfully requests allowance of Claims 1-13 at the Office's earliest convenience.

Respectfully submitted,



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